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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,632	07/08/2003	Yean Kuen Fang	1981036	1450

7590 03/17/2005

PRO-TECHTOR INTERNATIONAL
20775 Norada Court
Saratoga, CA 95070-3018

EXAMINER

HITESHEW, FELISA CARLA

ART UNIT	PAPER NUMBER
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1765

DATE MAILED: 03/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/615,632	FANG ET AL	
	Examiner	Art Unit	
	Felisa C. Hiteshew	1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

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Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Taiwan on October 16, 2002. It is noted, however, that applicant has not filed a certified copy of the Taiwan application 09112151 as required by 35 U.S.C. 119(b).

Claim Objections

2. Claim 3 is objected to because of the following informalities: "A m_ thod" should be - - A method- -. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claim 1 recites the limitation "...gallium nitride..." in line 1. There is insufficient antecedent basis for this limitation in the claim. Please insert the word -a—before the word "gallium" for proper antecedence.

4. Claim 1 recites the limitation "...silicon substrate..." in line 1. There is insufficient antecedent basis for this limitation in the claim. Please insert the word -a—before the word "silicon" for proper antecedence.

5. Claim 1 recites the limitation "...buffer layer..." in line 5. There is insufficient antecedent basis for this limitation in the claim. Please insert the word -a—before the word "buffer" for proper antecedence.

3. Claim 1 recites the limitation "...silicon carbon nitride..." in line 5. There is insufficient antecedent basis for this limitation in the claim. Please insert the word -a—before the word "silicon" for proper antecedence.

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4. Claim 1 recites the limitation "...gas mixture..." in line 6. There is insufficient antecedent basis for this limitation in the claim. Please insert the word —a—before the word "gas" for proper antecedence.

5. Claim 1 recites the limitation "...reactor..." in line 6. There is insufficient antecedent basis for this limitation in the claim. Please insert the word —a—before the word "reactor" for proper antecedence

Allowable Subject Matter

6. Claims 2-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

8. The following is a statement of reasons for the indication of allowable subject matter: The most relevant prior art of reference is that of U.S. Patent No. 6,844,227 B2 (Kubo, et al). However, it does not teach nor fairly suggest singularly or in any combination thereof a method of growing a gallium nitride on a silicon substrate, including the following steps: (a) providing silicon substrate whereon gallium nitride is grown, (b) removing oxide layer on silicon substrate, (c) growing a buffer layer of silicon carbon nitride by supplying a gas mixture of H₂, SiH₄, NH₃, and C₃H₆ to a reactor maintaining at a specified growing pressure and temperature, during a specified length of growing time.

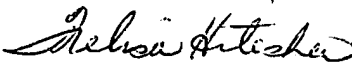
Any inquiry concerning this communication or earlier communications from the

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examiner should be directed to Felisa Hiteshew whose telephone number is (571) 272-1463. The examiner can normally be reached on Mondays through Thursdays from 4:30 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Utech, can be reached on (571) 272-1137. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-1463.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system. see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866- 217-9197 (toll-free).


FELISA HITESHEW
PRIMARY EXAMINER
AU 1765